



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 9, 2010

Vice President, Operations
Entergy Operations, Inc.
Grand Gulf Nuclear Station
P.O. Box 756
Port Gibson, MS 39150

**SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 - SUPPLEMENTAL
INFORMATION NEEDED FOR ACCEPTANCE OF LICENSE AMENDMENT
REQUEST FOR AN EXTENDED POWER UPRATE (TAC NO. ME4679)**

Dear Sir or Madam:

By letter dated September 8, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102660409), Entergy Operations, Inc. (Entergy, the licensee), submitted a license amendment request for the Grand Gulf Nuclear Station, Unit 1. The proposed amendment will increase the maximum reactor core power operating limit from 3,898 megawatts thermal (MWt) to 4,408 MWt. The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this amendment. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an amendment to the license (including the technical specifications) must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

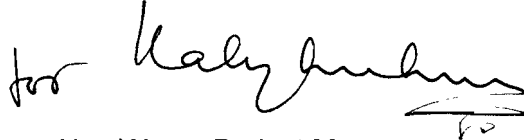
The NRC staff has reviewed your application and concluded that the information delineated in the enclosure to this letter is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed amendment request in terms of regulatory requirements and the protection of public health and safety and the environment.

In order to make the application complete, the NRC staff requests that Entergy supplement the application to address the information requested in the enclosure by December 1, 2010. This will enable the NRC staff to begin its detailed technical review. If the information responsive to the NRC staff's request is not received by the above date, the application will not be accepted for review pursuant to 10 CFR 2.101, and the NRC will cease its review activities associated with the application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated time frame in this letter were discussed with Mr. Jerry Burford of your staff on October 25, 2010.

If you have any questions, please contact me at (301) 415-1445.

Sincerely,

A handwritten signature in black ink, appearing to read "for Alan Wang". The signature is written in a cursive style and is positioned to the left of the typed name.

Alan Wang, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure:
As stated

cc w/encl: Distribution via Listserv

SUPPLEMENTAL INFORMATION NEEDED FOR ACCEPTANCE
OF LICENSE AMENDMENT REQUEST BY THE
OFFICE OF NUCLEAR REACTOR REGULATION
EXTENDED POWER UPRATE
GRAND GULF NUCLEAR STATION, UNIT 1
DOCKET NO. 50-416

By letter dated September 8, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102660409), Entergy Operations, Inc. (Entergy, the licensee), submitted a license amendment request for an extended power uprate (EPU) for the Grand Gulf Nuclear Station, Unit 1. The proposed amendment will increase the maximum reactor core power operating limit from 3,898 megawatts thermal (MWt) to 4,408 MWt. As part of the acceptance review process the U.S. Nuclear Regulatory Commission (NRC) staff has concluded that the information delineated below is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed amendment request in terms of regulatory requirements and the protection of public health and safety and the environment:

- 1) Equipment Qualification (EQ) evaluation of all Group II items should be completed including determination regarding remaining life and required modification to the components or replacement of them. In case of replacement, please identify the replacement components and discuss how the replacement components will satisfy the EQ rule under EPU conditions.
- 2) Group III items need to be replaced prior to EPU implementation. Please identify the replacement components and discuss how the replacement components will satisfy the EQ rule under EPU conditions.
- 3) Please provide supplemental information regarding analysis of the Spent Fuel Pool under increased decay heat loads and the analysis of the enhanced ultimate heat sink performance credited in the accident analyses.
- 4) In Sections 2.8.6.1, "New Fuel Storage," and 2.8.6.2, "Spent Fuel Storage," of its submittal, the licensee cites NEDC-33004P-A, Revision 4, "Constant Pressure Power Uprate," Class III, July 2003, Section 6.3.4 as the basis for demonstrating compliance with 10 CFR Appendix A General Design Criterion 62, "Prevention of criticality in fuel storage and handling." However, NEDC-33004P-A, Section 6.3.4 addresses the increased decay heat load associated with a constant pressure power uprate and does not address criticality. Therefore, there is no information in the licensee's submittal that addresses criticality in fuel storage and handling and the NRC staff has insufficient information to begin its review. The NRC staff requests the licensee provide the nuclear criticality safety analysis that demonstrates compliance with GDC 62.

Enclosure

The information requested and associated time frame in this letter were discussed with Mr. Jerry Burford of your staff on October 25, 2010.

If you have any questions, please contact me at (301) 415-1445.

Sincerely,

/RA by Kaly Kalyanam for/

Alan Wang, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure:
As stated

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ADAMS Accession No. ML103010200

*via e-mail

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NAME	AWang	JBurkhardt	RMathew (A)*	AUlises*	GCasto*	MMarkley	AWang (NKalyanam for)
DATE	10/28/10	10/28/10	10/22/10	10/28/10	10/28/10	11/9/10	11/9/10

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